THE GENESEE FARMER.

Vol. V. ROCHESTER, OCTOBER 24, 1835. No. 43.

Published by Luther Tucker.

Terms.—The Farmer is published every Saturday, making an annual volume of 416 pages, to which is added a Title-page and Index, at the low price of $2,50, or $2,00 if payment is made at the time of subscribing.

☞ All subscribers must commence with the volume, Jan. 1, or with the half volume, July 1. No subscription taken for less than six months.

THE GENESEE FARMER.

SATURDAY, OCT. 24, 1835.

On Comets.

As the Comet which has been seen for more than a month past through good telescopes, is now visible to the naked eye and increasing in splendor, —we are persuaded that the following extract from Sir John W. Herschell's Treatise on Astronomy, must generally prove interesting to our readers. It may be considered as one of the best and latest views that has been taken of these extraordinary visitants.

"The extrordinary aspect of Comets, their rapid and seemingly irregular motions, the unexpected manner which they often burst upon us, and the imposing magnitudes which they occasionally assume,—have in all ages rendered them objects of astonishment, not unmixed with superstitious dread to the uninstructed, and an enigma to those most conversant with the wonders of creation and the operations of natural causes. Even now that we have ceased to regard their movements as irregular, or as governed by other laws than those which retain the planets in their orbits, their intimate nature, and the offices they perform in the economy of our system, are as much unknown as ever. No rational or even plausible account has yet been rendered of those immensely voluminous appendages which they bear about with them, and which are known by the name of their tails, (though improperly, since they often precede them in their motions,) any more than of several other irregularities which they present.

"The number of comets which have been astronomically observed, or of which notices have been recorded in history, is very great, amounting to several hundreds; and when we consider that in the earlier ages of astronomy, and indeed in more recent times, before the invention of the telescope, only large and conspicuous ones were noticed; and that since due attention has been paid to the subject, scarcely a year has passed without the observation of one or two of these bodies, and that sometimes two and even three have appeared at once,—it will be easily supposed that their actual number must be at least *many thousands*. Multitudes indeed must escape all observation, by reason of their paths traversing only that part of the heavens which is above the horizon in the day time. Comets so circumstanced can only become visible by the rare coincidence of a total eclipse of the sun,—a coincidence which happened, as related by Seneca, 60 years before Christ, when a large comet was actually observed very near the sun. Several however stand on record as having been *bright enough to be seen in the day time*, even at noon and in bright sunshine. Such were the comets of 1402 and 1532, and that which appeared a little before the assassination of Cæsar, and was (*afterwards*) supposed to have predicted his death.

"That feelings of awe and astonishment should be excited by the sudden and unexpected appearance of a great comet, is no way surprising; being in fact according to the accounts we have of such events, one of the most brilliant and imposing of all natural phenomena. Comets consist for the most part of a large and splended but ill defined nebulous mass of light called the head, which is usually much brighter towards the center, and offers the appearance of a vivid *nucleus*, like a star or planet. From the head, and in a direction *opposite to that in which the sun is situated* from the comet, appear to diverge *two* streams of light which grow broader and more diffusive at a distance from the head, and which sometimes close in and unite at a little distance behind it, sometimes continue distinct for a great part of their course; producing an effect like that of the trains left by some bright meteors or like the diverging fire of a sky rocket, only without sparks or perceptible motion. This is the tail. This magnificent appendage attains occasionally an immense apparent length. Aristotle relates of the tail of the comet of 371 A. C. that it occupied a third of the hemisphere, or 60°; that of A. D. 1618 is stated to have been attended by a train no less than 104° in length. The comet of 1680, the most celebrated of modern times, and on many accounts the most remarkable of all, with a head not exceeding in brightness a star of the second magnitude, covered with its tail an extent of more than 70° of the heavens, or as some accounts state 90°.

"The tail is however, by no means an invariable appendage of comets. Many of the brightest have been observed to have short and feeble tails, and not a few have been entirely without them. Those of 1585 and 1763 offered no vestige of a tail; and Cassini describes the comet of 1682 as being as round and as bright as Jupiter. On the other hand instances are not wanting of comets furnished with many tails or streams of diverging light. That of 1744 had no less than six, spread out like an immense fan, extending to a distance of nearly 30° in length. The tails of comets too, are often curved, bending in general towards the region which the comet has left, as if moving somewhat more slowly, or as if resisted in their course.

"The smaller comets, such as are visible only in telescopes, or with difficulty by the naked eye, and which are by far the most numerous, offer very frequently no appearance of a tail, and appear only as round or somewhat oval vaporous masses, more dense towards the center, where however they appear to have no distinct nucleus, or any thing which seems entitled to be considered as a solid body. Stars of the smallest magnitude remain distinctly visible, though covered by what appears to be the densest portion of their substance; although the same stars would be completely obliterated by a moderate fog, extending only a few yards from the surface of the earth. And since it is an observed fact that even those larger comets which have presented the appearance of a nucleus have yet exhibited *no phases*, though we cannot doubt that they shine by the reflected solar light, it follows that even these can only be regarded as great masses of their vapor, susceptible of being penetrated through their whole substance by the sunbeams, and reflecting them alike from their interior parts and from their surfaces. Nor will any one regard this explanation as forced, or feel disposed to resort to a phosphorescent quality in the comet itself, to account for the phenomena in question, when we consider the enormous magnitude of the space thus illuminated, and the extremely small mass which there is ground to attribute to these bodies. It will then be evident that the most unsubstantial clouds which float in the highest regions of our atmosphere, and seem at sunset to be drenched in light, and to glow throughout their whole depth as if in actual ignition, without any shadow or dark side,—must be looked upon as dense and massive bodies compared with the filmy and all but spiritual texture of a comet. Accordingly whenever powerful telescopes have been turned on these bodies, they have not failed to dispel the illusion which attributes solidity to that more condensed part of the head, which appears to the naked eye as nucleus; though it is true that in some, a very minute stellar point *has* been seen, indicating the existence of a solid body.

"It is in all probability to the feeble coercion of the elastic power of their gaseous parts, by the gravitation of so small a central mass, that we must attribute this extraordinary development of the atmosphere of comets. If the earth, retaining its present size, were reduced by any internal change (as by hollowing out its central parts) to one thousandth part of its actual mass, its coercive power over the atmosphere would be diminished in the same proportion, and in consequence the latter would expand to a thousand times its actual bulk; and indeed much more, owing to the still further diminution of gravity by the recess of the upper parts from the center.

"That the luminous part of a comet is something in the nature of a smoke, fog, or cloud, suspended in a transparent atmosphere, is evident from a fact which has been often noticed, viz.—that the portion of the tail where it comes up to, and surrounds the head, is yet separated from it by an interval less luminous, as if sustained and kept off from contact by a transparent stratum, as we often see one layer of clouds laid over another with a considerable clear space between. These and most of the other facts observed in the history of comets, appear to indicate that the structure of a comet, as seen in the direction of its length, must be that of a hollow envelop, of a parabolic form, enclosing near its vertex, the nucleus and head. In all probability however, they admit great varieties of structure, and among them may very possibly be bodies of widely different physical constitution.

"We come now to speak of the motions of comets. These are apparently most irregular and capricious. Sometimes they remain in sight for only a few days, at others for many months. Some move with extreme slowness, others with extraordinary velocity; while not unfrequently, the two extremes of apparent speed are exhibited by the same comet in different parts of its course. The comet of 1472 described an arc of the heavens of 120° in extent in a single day. Some pursue a direct, some a retrograde, and others a tortuous and very irregular course; nor do they confine themselves, like planets, within any certain region of the heavens, but traverse indifferently every part. Their variations in apparent size, during the time they continue visible, are no less remarkable than those of their velocity; sometimes they make their first appearance as faint and slow moving objects, with little or no tail; but by degrees accelerate, enlarge, and throw out from them this appendage, which increases in length and brightness till (as always happens in such cases) they approach the sun and are lost in his beams. After a time they again emerge on the other side, receding from the sun with a velocity at first rapid, but gradually decaying. It is after thus passing the sun, *and not till then*, that they shine forth in all their splendor, and that their tails acquire their greatest length and development; thus indicating plainly the action of the sun's rays as the exciting cause of that extraordinary emanation. As they continue to recede from the sun, their motion diminishes and the tail dies away, or is absorbed with the head, which itself grows continually feebler, and is at length altogether lost sight of, in by far the greatest number of cases *never to be seen more*.

"Without the clue furnished by the theory of gravitation, the enigma of these seemingly irregular and capricious movements might have remained forever unresolved. But Newton having demonstrated the possibility of any conic section whatever being described about the sun, by a body revolving under the dominion of that law, immediately perceived the applicability of the general proposition to the case of cometary orbits, and the great comet of 1680, one of the most remarkable on record, both for the immense length of its tail and for the excessive closeness of its approach to the sun (within one sixth of the diame-

ter of that luminary) afforded him an excellent opportunity for the trial of his theory. The success of the attempt was complete. He ascertained that this comet described about the sun as its focus, an elliptic orbit of so great an eccentricity as to be undistinguishable from a parabole (which is the extreme or limiting form of the ellipse when the axis becomes infinite,) and that in this orbit the areas described about the sun were, as in the planetary ellipses, proportional to to the times. The representation of the apparent motions of this comet by such an orbit, throughout its whole observed course, was found to be as complete as those of the motions of the planets in their nearly circular paths. From that time it became a received truth that the motions of comets are regulated by the same general laws as those of the planets—the difference of the cases consisting only in the extravagant elongation of their ellipses, and in the absence of any limit to the inclinations of their planes to that of the ecliptic—or any general coincidence in the direction of the motions from west to east, rather than from east to west, like what is observed among the planets.

"For the most part, it is found that the motions of comets may be sufficiently well represented by parabolic orbits,—that is to say, ellipses whose axes are of infinite length, or at least so very long that no appreciable error in the calculation of their motions, during all the time they continue visible would be incurred by supposing them actually infinite. The parabole is that conic section which is the limit between the ellipse on the one hand, which returns into itself, and the hyperbola on the other which runs out to infinity. A comet therefore which should describe an elliptic path, however long its axis, must *have* visited the sun before, and must again return (unless disturbed) in some determinate period; but should its orbit be of the hyperbolic character, when once it has passed its perihelion, it could never more return within the sphere of our observation, but must run off to visit other systems, or be lost in the immensity of space. A very few comets have been ascertained to move in hyperbolas, but many more in ellipses. These then, in so far as their orbits can remain unaltered by the attractions of the planets, must be regarded as permanent members of our system.

"The most remarkable of these is the comet* of Halley, so called from the celebrated Edmund Halley, who on calculating its elements from its perihelion passage in 1682 when it appeared in great splendor, with a tail 30° in length, was led to conclude its identity with the great comets of 1531 and 1607, whose elements he had also ascertained. The intervals of these successive apparitions being 75 and 76 years, Halley was encouraged to *predict* its reappearance about the year 1759. So remarkable a prediction could not fail to attract the attention of all astronomers; and as the time approached, it became extremely interesting to know whether the attractions of the larger planets might not materially interfere with its orbitual motion. The computation of their influence from the Newtonian law of gravity, a most difficult and intricate piece of calculation, was undertaken and accomplished by Clairaut, who found that the action of Saturn would retard its return by 100 days; and that of Jupiter by no less than 518, making in all 618 days, by which the expected return would happen later than on the supposition of its retaining an unaltered period—and that in short, the time of the expected perihelion passage would take place within a month, one way or other, of the middle of April, 1759. It actually happened on the 12th of March in that year. Its next return to the perihelion has been calculated by Messrs. Damoiseau and Pontecoulant, and fixed by the former on the 4th and by the latter on the 7th of November, 1835, *about a month or six weeks before which time it may be expected to become visible in our hemisphere*; and as it will approach pretty near the earth, will very probably exhibit a brilliant appearance, though to judge from the successive degradations of its apparent size and the length of its tail in its several returns since its first appearance on record (in 1305, 1456, &c.) we are not now to expect any of those vast and awful phenomena which threw our remote ancestors of the middle ages into agonies of superstitious terror, and caused public prayers to be put up in the churches against the comet and its malignant agencies." (*To be continued.*)

* The one which is now visible.—*Ed. Gen. Far.*

Superiority of the White Currant.

The editor of the Boston Courier has copied into that paper the remarks of our correspondent W. W. B. (page 292) on the superiority of the White Currant, and appends to them the following observations:

"This writer's experience differs very much from that of persons in this vicinity, who have raised much of this fruit and manufactured considerable wine. We could never discover any difference in the taste of the fruit when ripe. The late Mr. John Kenrick of Newton, assured us that he could perceive no difference whatever in the fruit itself, or the wine, but merely that of *color*."

There are at least two varieties of the White Currant, as may be seen by examining Prince's Catalogue. We know not how to distinguish them however, never having cultivated but one kind; but we can assure the editor of the Courier that ours is a very different fruit from the Red Currant in *flavor* as well as in *color*; and we believe that none of the many persons who have tasted both kinds in our garden, have ever failed to give a decided preference to the White Currant. The inference which we should feel authorized to draw in this case, would be that the White Currant cultivated in the vicinity of Boston is an inferior variety; and it would give us pleasure to supply the editor or any of his particular friends, with cuttings from our garden.

Culture of Nyssa Multiflora.

We should have been pleased if some experienced cultivator had noticed the inquiry of our correspondent at page 301 respecting the cultivation of the Gum tree. We may say however, that we procured one from Prince's Nursery, and that it died after having been in a decline for several years. It was planted in a rich *limestone* soil; and we have no doubt that its failure was owing to this circumstance.

There is a species of the Sour Gum or Pepperidge which occurs in several places in the Genesee Country,—as in the borders of the swamps which lie on the south side of the Ridge Road west of this city, and in similar situations in Junius; but we have not had an opportunity to determine to which of the two *northern* species of Nyssa, it belongs. Probably both require the same kind of soil. These swamps we believe to be very *sour*; and as we have seen that tree in no other situations, we would infer that a sour soil is essential to its growth and vigor.

October Freshet.

At the moment of writing this the sun shines clearly, yet the weather seems any thing but fair, and "lowering clouds" still betoken rain. We have fairly at present an October freshet. The depth in guage upon a three story building, measures for twenty-one days in the present month, five inches and a quarter, and the Genesee River has attained nearly its maximum rise. It is still rising. October is not generally a wet month, yet more rain has fallen for the first twenty-one days of it, than during any month in five years, except two, viz: July, 1831, 5 4, and May, 1833, 6 1 inches.

The depth of rain in October,			1831, was	4.2
"	"	"	1832, "	1.3
"	"	"	1833, "	1.3
"	"	"	1834, "	3.4
"	to the 21st	"	1835, "	5.2

Great Flood.—Since Sunday evening last, we have had uncommonly heavy showers, which have given a volume to the "Genesee" seldom witnessed. We apprehend that considerable damage will be sustained by the farmers along its banks, as the fruits of their industry of various kinds, are continually wending their way to the lake. The water is still on the rise, and the rain still falling. The quantity of floodwood continually descending the stream excites fears for our bridges, against which it frequently lodges in vast quantities.—*Daily Adv.*

The Flood, again.—The river has continued to rise since our last notice till the present time, and now (4 o'clock, P. M.,) as rapidly as at any time during the last twenty four hours. It has not been known as high by two or three feet, since the settlement of the "Genesee Valley," a period of forty years. We learn that great damage has been sustained at Mt. Morris, Livingston county, by the destruction of mill dams and other property. Considerable loss has been already sustained here, and the liveliest apprehension is felt for the safety of a portion of the "Old Bridge," a portion of the west abutment having already given away. The river has been full of wood, rails and lumber of various kinds during the greater part of the day, and we saw one *entire bridge* dashed to pieces against the aqueduct. Indeed the Genesee Falls seem striving to vie with the famed Niagara. If the waters do not soon reach their zenith we know not what calamity may result from their present threatning aspect. The farmers above must have sustained severe losses from the present unexampled inundation.—*Ib.*

From the Farmer and Gardener.

Gama Grass.

Mr. E. P. Roberts—I perceive in the 18th No. of the Farmer and Gardener, you express a desire that "some one of the many gentlemen who have sown Gama Grass in this quarter, should communicate how it stands our climate." I have tried it upon a limited scale, but the result has been such as to enable me, I think, to respond to your desire with a high degree of confidence in the correctness of my conclusions. In the spring of 1834, I had the favor to receive from a friend, a very small package of seed, (but too late from some miscarriage in its transmission for successful propagation,) and on the 19th of April I planted them in my garden, 18 inches apart, to number of about a dozen. Four only came up, which, however, grew well during the summer without once watering, notwithstanding the unusual drouth, and without manuring or any particular attention. Indeed, I had no very exalted ideas of its value upon high land, and I noticed it but little. I observed, however, that it was eaten down once or twice during the latter part of summer by horses accidentally getting loose in the garden, and once during fall—so that when the frosts of winter came, it was not more than three or four inches high. Thus it neither had any natural covering of its own, nor did I give it the least artificial protection. The situation was

flat and entirely exposed to the northern blasts and the severity of winter. The continuance and intensity of the cold of last winter have scarcely a parallel in this climate, within the period of the last century. On 31st March last, I took up the plants, with the view to transplanting, and I found that they had not only passed the severity of the winter unscathed and unhurt, but indicated an extraordinary degree of fruitfulness, health and vigor. Having subdivided the plants, I found that I had more than 40 offsets or branches with a root to each, and some 12 or 15 without—all of which I planted, and I have now 41 plants living, some of which would give from 20 to 25 plants or offsets each. The summer of 1831 being one of unusual drouth, the seed having been sown too late in the spring to give the plants the advantage of the vigor of an early growth, and yet having expanded and increased in number more than ten fold, and the winter following being characterized by a severity not likely to be exceeded, and the plants naked and entirely exposed, and yet not in the least affected, there seems to be no question that the *Gama Grass* will stand any contingency of season likely to occur in this climate, and so far the object as indicated by your desire seems to be met. But so conclusive are my convictions, not only of its capacity to resist the drouths of our summers and the severity of our winters, but also of its incomparable value as an article of provender, that I cannot forego this occasion to press it upon the attention of all who have an acre of land for agricultural purposes. On the 29th of March, of the present year, I transplanted the offsets as subdivided, to the number above stated, about 18 inches apart. I selected for this purpose a hard piece of ground, and of very moderate fertility, but well prepared, with the view of more fully testing its adaptation to a dry and arid soil—for although the previous results had been highly satisfactory, yet I was disposed to subject it to still further trials and hardships, that I might not be exposed to disappointment in the event of my introducing it into the plantation crops. I accordingly paid no more attention to it until June, when I hoed it and cleaned it of grass and weeds. It was evident that it suffered materially from this neglect, and to it I attribute the loss of most of the plants which were inserted without a root. In a short time I cut it, then about 15 inches high, with the expectation of its causing it to branch the more. I do not know that it had the effect. In a few days I perceived its growth to be so rapid, that it arrested my attention, and I slightly manured it with tobacco stalks. I again cut it on the 24th July, with the same view, it being about 16 to 17 inches high. It was now apparent to me that it possessed a recuperative power after cutting, and rapidity of growth far exceeding any other plant in the whole vegetable kingdom which ever came under my notice. On the 8th of August I again cut it, 15 days intervening only since the last antecedent cutting, and I found its growth greater both in height and bulk than before—and during the whole of which time it had not the advantage of a single shower of rain. Being now fully satisfied of its incalculable importance, especially to the tobacco growing counties of Maryland, I determined to cut it no more, and permit it to run to seed with the view of increasing my stock as well by the seed as by the offsets. But few of the plants have as yet produced seed, and I find great difficulty in securing those which have been matured. They ripen singly, and either drop and are lost in the earth, or are taken by birds. My limited experience justifies the following conclusions:—That it will grow in any good soil that will produce wheat, corn or tobacco—that the peculiarities and vicissitudes of our climate do not materially affect it—that its growth is so rapid it may be cut every 15 days from the middle of May until frost, and at that age it makes better and more delicate hay than when suffered to stand longer, *and is the best hay I ever saw*, resembling in odor the finest cured corn blades—that it is more easily cured than any other hay, in consequence of its containing but little succulence and less woody fiber—that it is preferred by stock to any other cured hay—and that, for the purpose of soiling and feeding green, which with us is so desirable during the summer months, after the first crop of clover fails, which is generally about the 10th of June, there is no grass to be compared to it. With regard to the quantity to be produced to the acre, I can of course form no conclusive estimate from my own experience. But enough has been developed to convince me that more gama grass hay may be produced on an acre of highly improved land than can be obtained from six times the quantity equally improved, in any other description of hay that I have ever observed.

Agricola, a very intelligent writer of Alabama, and who has perhaps more experience in this grass than any other individual in the United States, says, "I am assured in this climate, (Alabama) that planted 18 inches from plant to plant, and cut at every 15 days' growth, beginning the first day of May, when it is found from 3 to 3½ feet high, and ending the last of October, it will be found yielding 300,000 lbs. of green hay per acre." He farther states, that he has cured it at a loss of less than one half. But say that one third of that quantity can be produced, and that it may be cured with no more loss, you then have 100,000 lbs. of green hay, or 50,000 of dry, equal to 25 tons per acre. This seems to be an extraordinary product; and so it is. But when it is recollected, as my own experience justifies, that it may be cut every 15 days from the 15th of May to the last of October, from 14 to 18 inches high, and much thicker than clover, scepticism gives way. But it is said, that so long a time is required to establish a meadow, and so much attention requisite, that but few have sufficient patience to sustain a hope so long deferred, and that the advantage, however great, is too remote. To this objection, truly suicidal in itself, and which, unfortunately, is too common in matters appertaining to agricultural improvements, I reply that the instances are rare indeed, in which our condition in life is materially improved without patience, perseverance and toil. If such a principle had influenced generally the determinations of man—if education had been stayed because of the slow and almost imperceptible steps with which it advances to successful accomplishment, what would now have been the state of the world, its moral and social condition?—where those vast and extraordinary developments, in the arts and sciences, as applicable to the uses and purposes of men?—all, all enshrouded in the dark and hopeless clouds of chaos. But let us see what is the delay attendant upon the establishment of an acre of *Gama*. We will suppose that seed may be obtained by as many as are disposed to make the experiment to raise 20 plants—at the close of the first year you will have, as has been shown by experience, ten for one, equal to 200, at the close of the 2d year 20 for 1, equal to 4000, and at the close of the 3d year, in the same ratio, 80,000, enough to establish, at 18 inches apart, which seems now to be the distance preferred by Agricola, between 4 and 5 acres of meadow—more than would be necessary for any plantation in the state. In the first year of final planting out, which would be the 4th from the beginning, you would realize, as has been shown by the experience of Wm. B. Meares, Esq. of N. Carolina, 63,000 lbs. of green hay per acre. See 15 vol. A. Farmer. The 5th and 6th years will complete the meadow, and leave it without further care, except occasional manuring, and it is found to benefit by manure to the same extent of other grasses, at which time it will be found producing at least the quantity as suggested by me above. Mr. Magoffin, of Alabama, informs us that he has actually made at the rate of 90 tons of green hay per acre in one year—and he believes that 300,000 lbs. may be produced. See A. Farmer, 13 vol. The result of the experiment of Dr. Hardeman, of Missouri, is still more flattering. See A. Farmer, vol. 8. But it is unnecessary to quote farther. Of the immense value of this grass upon dry land, there cannot be a question. So much for the delay—and if 100 seeds could be obtained the first year, one year would be saved in the establishment of an acre. Let us now see the labor. The first year the care of 20 plants would not be worth naming—the 2d year the labor of attending to 200 plants may be estimated by the fact, that the whole would not occupy the space of 25 feet square. The next year's work would be something—but all who have planted an acre of tobacco know that it would not take the hands on the smallest plantation two hours to plant 4000, and as regards the subsequent culture for the year, and the preparation of the ground, as the plants would occupy less than the fourth of an acre, they can also form an accurate idea. The work of the 4th year, the year on which the plants would be set out for final standing, would be the only labor of consequence. It would take about 18,000* plants per acre, and would probably occupy a day, and in the same ratio if the 5 acres should be planted, which would be unnecessary, unless near a city where the surplus would command a market. It would then require occasional stirring and hoeing, to keep down weeds and grass, for the next two years only. Thus it will be seen that the delay is not much greater than in establishing a timothy meadow, when you reflect upon the time occupied in clearing, ditching and preparation, and generally two years after sowing before you realize a crop. But what is the delay compared with the value of the improvement? An acre of land near a city, producing 25 tons at $15 per ton, would give $375—deduct $75 for cutting, interest on the previous value of the land, &c. and you have the interest annually on a capital of $5000. Will it be said then that when your acre of land, worth but $100, is made in five or six years to give you the product of a capital of $5000, you are not requited for all your delay and labor? But my remarks are principally intended for the lower counties of Maryland, where grass is scarce. An acre set in *Gama*, would not be worth any thing like that sum, but when its various advantages are considered in reference to the saving of corn, improvement of stock, &c., is there a planter who will not say that it would be worth $500 at the least? Is there any other mode by which an acre of land in the same period of time, can be improved in value to the same extent? Let me then urge upon every planter and farmer, the necessity of immediate action, if they can get but a single plant to begin with.† Let them not flatter themselves that the day is not distant when they will be enabled to procure seed sufficient to establish a meadow at once. The difficulty in saving seed is so great as to preclude the idea. If they then desire a meadow it must be raised in the manner I have indicated, or not at all. I hope I have shown that the delay and labor are not to be measured by the benefit conferred; and most sincerely do I trust that the day is not distant, when it will not only be found gracing some proud spot in every lordly manor, but also, that its gracefully hanging blades will be seen decorating some modest square in the plat of the more humble cottager.

MELIBÆUS.

Saint Mary's co. Md., Sept. 15, 1835.

A New Method of Propagating
THE CHINESE MULBERRY.

Capt. Chandler, Superintendent of the Farm School on Thompson's Island, has a mode of propagating the shrub above named, which we think ingenious, and deserving of imitation. He takes plants from the nursery, with as much of the root as practicable, and makes a ligature just below each bud or shoot, by twisting a very fine wire round the stock. He then sets the root end in a trench or furrow, and causes the plant to incline so as to form an angle with the horizon of about 45°. The ligatures impede the descent of the sap from the leaves to the original roots, and new roots are protruded just above each ligature, so that the next season, besides the original roots, there will be as many *rooted* cuttings as there are buds or ligatures.—*N. E. Farmer.*

All truth is valuable, and he that corrects the public taste is a public benefactor.—*Johnson.*

* The exact number is 19,360.

† The seed may be obtained of R. Sinclair, Jr., Seedsman, Light street, Baltimore.

"Notes by the Way."

We continue our extracts from Mr. Colman's "Notes by the Way:

Culture of Oats.

Oats are very extensively cultivated in the upper parts of the valley and on the hills. In general they succeed corn, though a different rotation is often practiced. The green sward is ploughed up, and oats sowed at the rate of three bushels to the acre, without manure. The land is then manured, and planted with corn; and this is followed by wheat, when the land is "stocked down," as it is termed, with herds grass and clover. Many farmers use, likewise, a large proportion of red top, which makes an excellent hay. Others begin the rotation with wheat, and obtain two crops of Indian corn from one manuring. The average crops of oats, under favorable cultivation, may be rated at from 35 to 40 bushels, though I received authentic accounts of crops amounting to 80 and 90 bushels. The promise of the crop was never better than this year, but it was at the very commencement of the oat harvest when I was there, and no instance of exact meausurement occurred to me. But two kinds of oats were observed by me: the common white oat, and the Siberian or Tartarian oat. One farmer spoke very highly of what he called the Smyrna oat as a heavier oat than the common, and a better yielder, but he could give me no satisfactory account of it. The Siberian or Tartarian oat, as it is denominated by Loudon, is but little cultivated, and seldom found alone. The straw is very large, and the grains are all pendant on one side of the stalk. It has, from this circumstance, acquired the designation of the horse-mane oat. It was stated to me, that a distinguished farmer in Walpole, N. H., had cultivated it exclusively several years; that he usually obtained sixty bushels to the acre, and they would weigh 36 lbs. to the bushel. This I have, however, only from report, a very doubtful authority in such cases. The Shakers, at Canterbury, spoke in praise of it; but Loudon says, "it is little cultivated." It is later in coming to maturity than the other oats, but its appearance when growing is singularly beautiful and promising.

Eighty bushels of oats to an acre is spoken of, as not an extraordinary crop in Scotland; and they speak of ninety and a hundred bushels to the acre, and upwards. The quantity of seed which they sow to an acre, is from four to six bushels. The quantity with us is, I believe, never over three bushels. It deserves particular inquiry and exact experiment, whether we sow enough seed; and what quantity might be most profitably employed. On this matter, which is of great importance to the agricultural interest, both in respect to oats and other grains, it were greatly to be wished that experienced farmers would communicate their views, and the results of their own practice and observation to the public.

At. Barnet, Vt., a place principally settled by Scotch families, and where the farming is very superior, they have excellent mills for hulling and flowering oats, and a good deal of oat flower of the finest kind is prepared for domestic use, and for the market.

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Raising of Wool.

The raising of wool is fast becoming the great business of this part of the country, to which their productive meadows, and their fine pasturage on the hills, seem admirably adapted. Walpole, Westminster, Cleremont, Wethersfield, Orford and Lime, all river towns, have long been distinguished for their improved stock, their admirable management, their extensive flocks, and their fine wool. I had the pleasure of visiting some establishments, which, as somewhat connected with a recent discussion of the comparative value of the Saxony breed of sheep, it may not be uninteresting to notice.

Mr. Wm. Jennison, of Walpole, N. H., has a flock of 370 sheep and lambs. Fifty-four of these are pure Saxony ewes, of the finest wool; the others are mixed, though finer. Of this 54 pure Saxony ewes, 4 proved barren; and from the remaining fifty he raised this year 48 lambs. Their average yield of wool this year, was 2 lbs. 3 oz. His whole clip of wool was sold without selection for one dollar per pound, and his Saxony lambs always bring 15 dollars per head. The demand is greater than he can supply. He considers his Saxony sheep as good nurses, and says he has none which disown their lambs. He has his lambs come the last of March; considers clover hay the best feed for his sheep, and feeds his ewes freely with potatoes, at the rate of about one quart per day to each. He washes his sheep in pure water; first dipping them in water, and taking them out immediately, and after they have stood wet about half an hour, then taking them again into running water, and the wool is easily and thoroughly cleansed. The construction of his mangers is excellent. The barn is placed on a side hill, and the sheep are kept on the ground in the lower story, which is open to the yard, but can be closed in case of necessity; and is divided into compartments, for fifty in each. The hay is put into the mangers from above.

I visited likewise the establishment of Mr. Hodskins in Walpole, who has a flock of 800 sheep. From 200 Saxon ewes he this year raised 183 lambs; but his usual calculation, founded on long experience, is, that 225 sheep may be expected to raise 200 lambs. His yield of wool, washed and put up in the finest manner, averages 2 lbs. 4 oz.—last year 2 lbs. 7 oz., and it is understood that the whole lot was purchased at one dollar per pound. He does not permit his sheep to receive the buck until three years old, and thinks it profitable to keep them until 8 years old. He thinks that the wintering of 100 sheep will require 12 tons of hay. He found by experience that in one case 100 large old ewes eat a ton of hay in 10 days; in another case one ton of hay in 12 days. Yearling sheep will require not more than two-thirds as much. He salts his sheep twice a week, and allows about four quarts of salt to 100 sheep at a time. His success speaks for itself. The condition of his wool, which I had the pleasure of seeing, could not be improved.

There are many other flocks in this vicinity of considerable extent; and managed in an admirable manner. Leonard Jarvis, Esq., of Cleremont, N. H., has a very extensive flock of from 1500 to 2000 of Saxony and full blooded Merino. This gentleman sold, the last spring, the clip of several years, amounting to 18,000 lbs. Mr. Calvin Benton, a distinguished wool dealer, has given his certificate, in which he says that, "I consider it the finest, softest, and most valuable lot of American wool that I have ever packed without any exception. William Jarvis, Esq., of Wethersfield, Vt., on the opposite side of the river, has likewise a flock of about 600 fine wooled sheep, which I had the pleasure of seeing last spring in the finest condition possible. Both these gentlemen are able to furnish the Saxon and the Merino sheep of the best quality, and entirely unmixed.

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Seed Wheat.

An amusing and instructive anecdote was related to me of a farmer in Vermont, to whom his neighbors were accustomed to resort, for the purpose of procuring their seed wheat; as he was able to supply them with that which was very superior in its appearance, productiveness, and early maturity, which he was accustomed to call barrel wheat, and which readily commanded three dollars per bushel, when other wheat was sold for one dollar, and one dollar and a quarter. The secret was at last discovered. He used, before threshing his wheat, to select the best sheaves, and striking them over the head of an open barrel, three or four times before laying them down to be threshed, obtained in this way a superior seed. As in this way the largest and earliest ripe kernels would be shaken out, and fall into the barrel, he obtained what might be considered a selected seed, which he denominated his "barrel wheat;" and which the farmers, until they heard how to do it for themselves, found their advantage in purchasing.

From the New York Farmer.

Bennet's Broadcast Sowing Machine.

Dear Sir—In answer to the inquiry of R. R. of Westchester, in relation to Bennet's Broadcast Sowing Machine, I will state that I purchased one of them about seven years since, at an agricultural store in Boston, the cost of which was *then* twenty dollars. This machine has been much used by myself and others, and I think with some little repairs, it may last twenty or thirty years longer.

As I run mostly upon grasses, (my land being peculiarly adapted to them,) I consider this machine quite indispensable. Every farmer is aware how important it is that grass seed should be sown *even*, and that it is almost impossible to sow it even by a throw from the hand, and more especially in a *windy day*; but with this machine you cannot sow it uneven, blow high or blow low, provided the barrow that carries the trunk shall be wheeled straight forward; and in this there is no difficulty, for our usual method is to make the lands to be sown either 21 or 31½ feet wide, (the trunk being about eleven feet long,) so that we pass either twice or three times over the land, as the case may be; this allows a little lap, which makes the covering of all the ground quite sure; or if we choose not to have small lands, we put up stakes for a guide, as in the case of drawing furrows for corn, &c. The machine may be so regulated as to sow from one to fifty quarts to the acre, and although it is best suited for grass seed, yet you may sow with it any other kind you please. There is great utility in this machine; it expedites business, and makes the work sure and safe. In sowing by hand there will be many vacant places, and wherever this is the case noxious weeds will come and occupy, and trouble one much; whereas on the other hand, in sowing with this machine, if you are in season and your ground in order, you may expect an even crop. It will require a little practice and observation with this machine, in order to regulate the quanty of seed to be sown on an acre.

I would here remark that I always sow as much as twelve quarts of timothy seed to the acre, and in order to have it well rooted and matted before the winter sets in, I sow in time to get the latter August rains, or early in September,—without this I have found, from sad experience, that our winters in this region, have more or less frozen out the roots, and thereby destroyed much of the crops,—then in the spring I put on six to eight pounds of clover seeed to the acre, but I sow no grain with it, for I have generally found the crop of grass alone the most profitable.

I am, however, wandering quite away from the question, and will therefore conclude by just stating, that if I had forty acres of good ground prepared for sowing with grass seed, I would cheerfully give twenty dollars for the use of one of those machines, provided I could not hire one for less, fully believing I should be the gainer thereby. Very respectfully yonr obed't serv't,

S. P. Brittan.

Preserving Apples for Hogs.

Hogs may be kept well through the winter mostly on apples. Select the hard apples that will keep well, using the soft and less durable kinds for cider and for stock in the fall, and put them in a shed, or some building in a cold place where they will not be liable to be warmed by the sun. They should be gathered rather late when the weather is cold that they may not become heated; they will freeze and generally continue frozen through the winter; or if the weather should be changeable and they should freeze and thaw a few times they will not lose their substance like those that rot in the cellar. If you have apples that are soft and will not keep well, which you intend to give to your swine in the winter, it would be the better way to put them in a box or pen by themselves to be fed out first, and the hard ones by themselves to be kept later. Frozen apples should be warmed before given to hogs, and they will be sufficiently cooked by the process of freezing and thawing.—*Yankee Farmer.*

From the Cultivator.

New Material for Making Pork.

We have long known that apples would fatten hogs, but until we received the following communication, it had never entered our mind, that *apple pomace* could be successfully employed for this purpose. The statement of our correspondent would have been more satisfactory, if the weight and value of the hogs in the spring, or previous to their having been put up to fatten, had been stated. There is little doubt, however, that the apple pomace contributed essentially to augment the quantity of pork, and the more so in consequence of the cooking process, and as it did so, was manifestly clear gain.

"While addressing you, permit me to give you an account of my experiment on hogs this season. On the 15th October last, I shut up to fatten eleven hogs, about fifteen months old, and six shoats which were pigged on the 15th May last, having given to the whole nothing during the summer but the wash from the dairy, with a small orchard of about an acre and a half of ground, where they ate the premature apples that fell. I proceeded to fatten them by steaming six bushels of small potatoes with fourteen bushels of apple pomace, and one hundred weight of buckwheat canal [bran,] the whole incorporated well together while hot from the steamer with a wooden pounder, adding to the mixture the dairy wash, and supplying them with a plenty of charcoal and pure water. They were divided into three lots, and closely confined. I continued to give them this mixture until nine days before they were killed, during which latter period they were fed with corn. They were slaughtered on the first of December. The expense of fattening and the product, in pork, pigs, &c., are as follows:

30 bushels small potatoes, at 2s. 1d.....	$9 37½
8 cwt. buckwheat canal, 8s. per cwt.....	8 00
21½ bushels corn given the last 9 days,...	13 43
Apple pomace, say.....	00 00
Total expense of food,.....	$30 80½
Cr. By 36 cwt. 50 lbs. pork at $5,.....	$182 50
50 roasting pigs sold during sum...	50 00
6 shoats sold alive,.....	12 00
4 do. on hand, worth.....	6 00
	250 50
Deduct expense,.....	30 80
Balance,.....	$219 70

Respectfully, THOS. MEDFORD.
Bali Farm, Hyde Park, Jan. 1, 1835."

Sunshine and Shade.

A manufacturer of carmine who was aware of the superiority the French color, went to Lyons for the purpose of improving his process; and bargained with the most celebrated manufacturer in that city for the acquisition of his secret, for which he was to pay £1000. He was shown all the process, and saw a beautiful color produced; but he found not the least difference in the French mode of fabrication, and that which had been constantly adopted by himself. He appealed to his instructor, and insisted that he must have concealed something. The man assured him he had not, and invited him to see the process a second time. He minutely examined the water and the materials, which were in every respect similar to his own; and then very much surprised said, "I have lost my labor and my money, for the air of England does not permit us to make good carmine." "Stay," said the Frenchman, "don't deceive yourself—what kind of weather is it now?" "A bright sunny day," replied the Englishman. "And such are the days," said the Frenchman, "on which I make my color. Were I to attempt to manufacture it on a dark or cloudy day, my results would be the same as yours: let me advise you, my friend, always to make carmine on bright sunny days." "I will," rejoined the Englishman, "but I fear I shall make very little in London."—*Sir H. Davy.*

From Gibbon's Advocate of Science.

Chemistry Applied to Agriculture.

It is stated that the celebrated chemist Savoisier cultivated 240 acres of land in La Vendee on chemical principles, in order to set a good example to the farmers. His mode of culture was attended with so much success, that his crops amounted to a third more than those which were produced by the usual method; and in nine years his annual produce was doubled. Yet the generality of our yeomanry would as soon think of studying Hebrew, as the elementary principles of chemistry.

Sheep.

Our correspondents, it will be seen, differ upon the relative profits, to the farmer, of different breeds of this animal. While these differing opinions are maintained with decorum, they serve to enlighten the public mind as to the good qualities of each. The Merino and Saxon, we believe, had a common origin at no remote period; and their present difference is owing to breeding and climate. Upon the same farm, and under a like management, they will probably again approximate more and more to each other. It seems to be a well established fact, that the fleece of a breed cannot be improved in fineness except at the expense of carcass; nor the carcass improved, by high keep, or cross with a larger breed, without deterioration in the quality of the fleece. A friend a few days ago informed us, that by graining some fine fleeced sheep, during the last winter, he had added half a pound to the weight of their accustomed fleece, but that this increase in weight was made at the expense of quality; and he doubted whether the intrinsic value of the fleece had been increased. Another fact is worth remembering—the sheep, like the horse and ox, "is vastly modified in its form and characters, by the physical condition of the countries in which he is naturalized."—*Low.* If fed in a country of plains and rich herbage, he tends to become large, his fleece heavy and comparatively coarse. If in an elevated country, where the herbage is scanty, the size and fleece diminish, while the texture of the latter is improved.—*Cultivator.*

Deterioration of Silk Worms.

A superstitious notion formerly prevailed to a considerable extent that the eggs of the silk worm must be changed every two or three years to prevent the deterioration of the worm. This notion, like many others of the same class, is at war with reason and science. The supposition that good cocoons, after a few years, are no longer fit to produce good seed, is ridiculously absurd. The time has gone by when the idle and foolish theories of Buffon, Robertson, De Pauw and others, respecting the tendency of nature "to belittle" and degenerate every thing in the new world, are received as truths. Facts also have settled the question that the silk worm will not degenerate, except as a consequence of neglect, or the long propagation of those of diminutive size.—*Silk Culturist.*

Cows.

The management of cows, so as to keep them healthy, and ensure a constant supply of pure milk, is not generally understood in cities, and if understood is not practiced. Strolling through Orange, near Grand street, says the Editor of the New York Star, our olfactory nerves were refreshed with the delightful odor of cows, something like new mown hay, which perfumed the air, and that too in a part of the city not remarkable for its cleanliness. On pushing open the door of a wooden stable or pen, we found thirty fine cows, each in a stall, and kept in the most wholesome manner. They were attended by grooms like horses, curried and kept clean daily, fed with warm swill three times in twenty-four hours, besides meal and hay. The swill is emptied into a vat and pumped into their troughs, and the free use of water coursing constantly through the stable, keeps the place sweet and clean. The consequence of this treatment is, that their hides are smooth and glossy, the animals lively, and their udders distended with milk, which is served to city customers. We think this mode preferable to turning cows loose on the common, to pick up the stunted shrubbery, and nip the rank grass, or walk the streets gathering the offals of the city.

The breath of these cows is considered good for consumptive persons; and although the stable has not an inviting exterior, yet the condition of the tenants is really admirable, and we should prefer milk from animals kept so carefully.

Uses and Culture of Ruta Baga.

To the Editor of the Farmers' Register:—The Swedish turnep, or ruta baga, is a most valuable vegetable for all kinds of cattle. Some horses refuse it, but generally they are fond of it. When designed for horses, the roots should be well washed and chopped up—but for cows or hogs this is unnecessary. Indeed it is thought that cows thrive better upon the roots in a very dirty condition—but all these cattle eat more slowly and securely, I think, if the turneps are thrown to them in an undivided state. I used a turnep cutter when I first began to feed them, but discontinued it as troublesome and unnecessary.

The Swedish turnep, when first eaten by milch cows, gives the milk and butter a flavor something like that of garlic. This is not unpleasant to some persons, and becomes less obvious as the digestive organs of the cattle more perfectly assimilate the food. It may be obviated, however, by dissolving an ounce of saltpeter in a pint of water, and putting a table spoonful of the solution into each milk pan as the warm milk is emptied into it.

In the winter season, the butter from cows judiciously fed upon ruta baga, has the flavor and appearance of grass butter. Half a bushel per day, divided into three messes, is a fair allowance. I have sometimes fed a bushel and a half to each cow per diem. The vegetable is very grateful to the animal, which while eating it, requires little water to drink. I have known cows refuse to drink water for several weeks when freely fed on Swedish turneps. Straw, corn fodder, or coarse hay, is at the same time essential to enable them to chew the cud.

The skin remains slack, and the health more vigorous and decided, by the use of these turneps; and the amount of barn-yard manure is much increased. It is best to feed twice or thrice a day. In fattening cattle, Swedish turneps, sprinkled with corn meal, gives the meat a finer quality, juice and relish. It is also an economy where corn is high in price.

The ruta baga is generally thought to be a troublesome crop; and many relinquish its cultivation from the difficulty of its management, *when not thoroughly understood.* The ploughing or ridging, drilling, hand-hoeing, and care, are peculiar, and much unnecessary labor and pains often at first embarrass the cultivator. But when once well comprehended, the crop is usually estimated highly.

We generally plough up a barley, wheat or rye stubble, immediately after harvest; then roll and harrow it well. If we have fine manure, (we often use street dirt and bones,) this is hauled out and spread, and the ridges (two furrows cast together) are ploughed at once. These are rolled flat, and the seed drilled upon the top of them with a machine (a turnep drill) contrived for the purpose; or a porter bottle with a quill fixed in the cork, having a hole of sufficient size in the small end of the quill. If the manure is long, and intractable, the ridges are ploughed first, the dung is then carted and spread between them, and the double furrows are afterwards split, so as to cover in completely the long manure. The seed is sown tolerably thick. When the plant has four leaves, the supernumeraries are cut out with hand hoes, leaving the finest plants from six to twelve inches asunder. Eight inches is the average width between the plants; if they are allowed to stand thick, the crop is ruined, and no fear should be entertained to cut out freely.

Before hoeing, a light triangular harrow is run between the rows to level the earth and clear the ground from weeds. An implement with a slide behind and hinges in the front, so that the width can be changed at pleasure, according to the growth, is most convenient.

A mistake is often made with the turnep crop, in *hilling up* the roots by plough or hoe. The earth, on the contrary, should always be taken from the turnep. Its tap root is quite sufficient for its nourishment, and the bulb grows larger as the earth is *drawn from* it. The calculation is to hoe and cultivate the ground until it is quite level, harrowing or horse-hoeing between the rows,and hand-hoeing between the growing turneps. We sometimes sow barley, wheat, or rye among the ruta baga for a permanent crop, and cover in the seed when we give the turneps the last dressing with the harrow or horse-hoe. I have seen very good crops of grain after the turneps, and 300 bushels of turneps per acre. In planting Swedes for seed, care should be had that no other plants of the same family be permitted to flower near them, or in the same garden. Other kinds of turneps, cabbage and radishes, will change the character of the seed; and of course the quality of the roots will be subsequently altered from that of the original. A friend—G. H. Walker, of Hongford, Philadelphia county—who is exceedingly careful in all such matters, promises me to forward you some of the true breed, which you will do me a favor by distributing among our friends on James River, especially to George E. Harrison and John A. Selden, his brother Miles D. Selden, and Hill Carter, Esqrs.

In your climate, except in very severe winters, like the last, you have the advantage of being able to leave the turneps in the field, to be pulled as they are wanted for use. Here we are obliged by the severity of the season, to pull and top them by the middle of November, and to hoard them away in cellars or caves, where they sometimes heat, and require much handling.

You can sow later than we do, for the plant is one of a cold climate, and grows rapidly after the first frosts. I am, however, now [June 30] eating ruta baga raised this spring in my garden by mistake; the seed being sown instead of Savoy cabbage. I find them very palatable.

This turnep bears something the character of the pippin apple, which increases in sweetness and flavor by being kept. When the Swedish turnep is first taken from the ground in autumn, it has a raw or rank taste, when prepared for the table; but towards the middle of winter it improves very much. It is now sought after in our markets, often selling for 50 cents per bushel,for the use of the table in mid-winter and spring.

Its color is a fine rich looking yellow when boiled, and the only objection I know to it is, that during the process of cooking it gives out an unsavory odor. This is of less importance when the kitchens are separated from the dwelling house.

J. H. Gibbon.

Philadelphia County, July 2, 1835.

From the Farmer and Gardener.

Directions

For planting the Gama Grass seed, cultivating the grass, and curing the hay.

In the first place you must put your seed into a vessel, and to an ounce of it 2 gills of soot, pour thereon a quart of boiling water, let the seed soak 48 hours, then drain and roll it in plaster, when it will be fit for planting. Manure the ground *well*, with a compost consisting of equal parts of ashes, loam and stable manure, or vegetable mold from the woods, marsh mud and lime; plough it in *well*, harrow and pulverize finely, then make your drills one inch deep, 18 inches apart, and plant your seed the same distance asunder. They will come up in a few weeks, say two or three, and when up they must be kept clean of weeds, and the earth stirred two or three times during the season. If you plant but a small portion of seed, and desire to enlarge your stock of grass through that means, don't cut your grass, let it go to seed, and when the seeds are ripening, you must be careful to go into your patch every morning and pick them off the stalks, as they only ripen *one* or *two* at a time, and unless carefully watched will drop off and be lost.

Early in the spring of the 2d year, subdivide and transplant, and so each year until you have sufficient ground set out. Each plant will make ten or twelve offsets the first year, and twice that number the succeeding one.

If planted as soon as the frost is out of the ground, it will be fit to cut the first year by the first of June; succeeding years from two to four weeks sooner, and will bear cutting every thirty days for hay, and every fifteen days for soiling. It has yielded 300,000 pounds of green grass to the acre.

After each cutting, the earth should be stirred, and receive a light top dressing of leached ashes.

The grass cut in the morning may be put into stack in the afternoon; in stacking, take, alternately, a layer of oats, wheat or rye straw, and then a layer of Gama Grass, then sprinkle with salt, &c. until your stack is complete. By this means you not only effectually cure your Gama Grass, but convert your straw into a substance equally as acceptable to your stock as the best hay.

Robert Sinclair, Jr.
Seedsman, Baltimore.

P. S. An once of seed, which contains 260 kernels, will, by being planted and subdivided three seasons in succession, enable the culturist to set out a meadow of upwards of 53¼ acres, which will last him 70 years.

From the New England Farmer.

Swine.

We have heretofore, and very often, adverted to the subject of fattening swine; but as we are frequently honored with additions to our subscription list of persons who are not much acquainted with the contents of the former volumes, we shall, for their accommodation, sometimes use repetitions in substance, if not in words.

Acid or fermented food for swine has been much recommended. Arthur Young, a high authority among farmers, says, "the most profitable method of converting corn of any kind into food for hogs, is to grind it into meal, and mix this with water in cisterns in the proportion of five bushels of meal to one hundred gallons of water: stirring it well several times a day, for three weeks, in cold weather, or a fortnight in a warmer season, by which time it will have fermented well and have become acid, and until then it is not ready to use. The mixture should always be stirred immediately before feeding,and two or three cisterns should be kept fermenting in succession, that no necessity may occur of giving it not duly prepared. Judge Peters, of Pennsylvania, whose authority as an agriculturist is of great weight, observed, that sour food is not only most grateful and alimentary to swine, but that one gallon of sour wash goes farther than two of sweet.

But an English work entitled *Farmer's Calendar*, declares, that "much has been said, and little understood, about *purposely* souring food for hogs. It is not that acidity can possibly tend to pinguefaction, [making fat,] but it is found that hogs will readily fatten upon acid, or rather accescent food, a sweetish taste and glutinous quality succeeding fermentation; and that they will do still more readily upon such as has never reached the acid state, I know, and have seen in hundreds of instances. Is a proof wanted? How much more readily do the country hogs feed upon sweet and unfermented food, than those of the starch house upon the fermented and subacid wash, however rich. I say subacid, for did not starch makers run off a great part of that which is really *sour*, they would kill instead of fatten their hogs."

In order to reconcile these writers it will only be necessary to advert to the different stages of ordinary fermentation, and the products of each stage. The first stage of fermentation produces sugar, and is called the saccharine fermentation. The second stage develops alcohol, or spirit of wine, and is called the vinous fermentation. The third stage produces vinegar, and is called the acid fermentation; the fourth and last stage converts the matter fermenting into a substance which is not only offensive, but poisonous. and is called the putrid or destructive fermentation. Thus, if you soak wheat, or other farinaceous substance, in water of a proper temperature, it will first become sweet, and begin to sprout or vegetate; it will next afford spirit or alcohol; continue the process, the wash turns sour, at first slightly, and then more strongly acid, and at last the whole becomes putrid. It probably contains most nourishment when it is sweetest, but it is valuable till very sour, when it is worth little or nothing; and when the putrid fermentation has commenced, it is worse than nothing as food for any animal. The farmer then should give his fermented wash to his pigs while it is yet sweet, or but beginning to turn sour.

From the Farmer and Gardener.

Breed of Cattle.

The only reason that can be assigned why the farmer does not find the raising of cattle the most lucrative branch of his calling, is, that he does not pay proper attention to the breeds he keeps. No point is so much neglected—while it is at the same time generally acknowledged that none can be more profitably attended to. If the farmer would sit down and make a careful estimate of the difference in the profit upon a good and poor animal, he would readily see the importance of this subject. The writer of this recently sold two cows of the same age—the one a good, and the other a poor cow. Both came in at three years old, and both have had a calf every spring since. Both were sold without the calf—the best for $30 and the poorest for $17. Since the sale, I have, as is my custom, proceeded to "count the cost," or to estimate the *loss* and *gain* in the case. The following is the result—estimating that 25 dollars is the amount in butter, cheese, &c. obtained yearly from the best cow; that the other gave only half as much milk, and had poorer calves; and that the expense of keeping was the same for both.

BEST COW.

Amount in four years in butter,cheese, &c.	$100	
Amount of 4 calves, sold for $4 each,	16	
" for which cow sold.,	30	
		146
Keeping four winters on hay, &c.	40	
" " summers to grass,	16	
		56
Nett profit from cow,		90

POOR COW.

Amount in four years, in butter, cheese, &c.	$50	
Amount of 4 calves sold for $3 each,	12	
" for which cow sold,	17	
		79
Keeping four winters on hay, &c.	40	
" " summers to grass,	16	
		56
Nett profit from cow,		23

Now suppose that instead of raising those cows I had bought them at the same for which the best cow sold—for at 4 years old both cows had cost me the same in raising—I then have a nett profit on the best cow of $60,while on the poorer I sustained *an actual loss* of $7. In my estimate I may not have calculated precisely the cost of keeping, &c.; but this does not effect the *difference* between the good and the poor cow, estimated from its ultimate bearing upon my purse. I only ask my brother farmers to look at this calculation and see how much they loose by keeping poor cows. On other stock the same difference exists between the good and the poor; and if those who see this fact as I do, will still persist in their neglect of their breeds, it can only be through that *almost* infatuation which sometimes dictates their agricultural *principles*.

A Dairyman.

From the Maine Farmer.

Preserving Potatoes.

Every body (except Cobbet, and he's dead) loves potatoes, that is if in the first place they are ripe, in the second place, well preserved, and in the third place they are well cooked. Without stopping to doubt the abilities of the good wives of our land in this department of household economy, we will proceed to read their husbands a homily upon the "ways and means" of preserving potatoes as they are ripe, that is, have obtained a fair size, and are mealy and farinaceous when properly cooked. When digging, don't let each boy, or hand, have a pile of his own, where he empties his basket, spreading them out as much as possible upon the ground, in order that each potatoe may feel the full and direct influence of the sun and air. And furthermore, don't let them dig more than can be got in at night, and therefore allowed to be out 12 or 24 hours with nothing over them but a few straggling tops, as a sort of an apology for a covering. But if we may be allowed to advise in the premises —and we have followed plans,and by some spoiled as good potatoes as ever grown by our ignorance or carelessness, or both—we would recommend a cart covered on the top tightly with boards, or by an old coverlid, so that the potatoes when put in shall not be exposed at all to the light, and as little to the air, and carried into the cellar or bins as soon after they are taken from the hills as they can conveniently. The bins should also be so constructed that potatoes can be excluded from air and light, in short, so as to keep them in a similar state to that which they are in previous to their being dug—that is, secure from the light and air—with a little moisture, and a temperature sufficiently low to keep them from vegetating.

The plan laid down by Mr. Barnum, and published in our paper last summer, we think is a good one, viz: to make a bin, put some sand or turf at the bottom, cut some sods and line up the sides and ends with them, and when the potatoes are put in, cover them over with sods, and beat them down solid—this keeps them moist and cool, and we doubt not is an excellent plan.

The light has a peculiar action on some potatoes, making them heavy and watery, or waxy, and strong or rancid to the taste. It is perhaps not always possible to prevent this, when they have suffered from some disease of their tops, or have been disturbed while growing, or have not a suitable soil. As it regards the tops, it is generally the custom to throw them down and take no further trouble about them. A correspondent in the late number of the Farmer, recommends preserving them when they are green for fodder —and another correspondent cautions us against leaving them on the ground, because they form a harbor and breeding place for insects which will injure the next crop, especially if it be wheat.

From the Farmer and Gardener.

Lime as a Manure.

The efficacy of this mineral as a manure, is beginning to excite very general attention. The success which has uniformly attended its application to almost all kinds of soils, extorts confessions of its utility from many who, until recently, had but little if any faith in its meliorating powers. As there seems to be a universal desire to obtain information upon the subject of its *specific virtues*, we will endeavor to give something like an abstract view of them, and we know not how we can better effect our object, than by availing ourself of a condensation of the luminous paper upon the subject, submitted by Mr. *Browne*, of Derby, England, which may be found in the transactions of the society of arts. He asserts:

1st. That recent vegetables, as clover, laid on heaps and stratified with fresh lime, are quickly decomposed, even in a few days. The heat occasioned by the moisture of the vegetables uniting with the lime, he supposes, quickens the fermentation of the vegetable juices, and produces charcoal in consequence of combustion similar to that frequently produced in new hay stacks, which if any air be admitted burst into flame.

2d. Lime for many *months* continues to attract moisture from the air or earth, which it deprives, he supposes, of carbonic acid, and then suffers it to exhale again, as is seen on the plastered walls of new houses. On this account it must be *advantageous when mixed with dry or sandy soils*, as it attracts moisture from the air above, or the earth beneath; and this moisture is then observed by the lymphatics of the roots of vegetables.

3dly. By mixing *lime* with *clays* it is believed to make them less cohesive; and thus to admit of their being easily penetrated by vegetable fibers.

4thly. A mixture of lime with clay destroys its superabundance of acid, if such exists, and by uniting with it converts it into gypsum.

5thly. When lime is mixed with a compost of soil and manure, which is in the state of generating nitrous acid, it arrests the acid as it forms, and produces a calcareous niter, and thus prevents both its exhalation and its easy elutriation.

And lastly, fresh lime destroys worms, snails, and other insects, with which it happens to come in contact, and with which almost every soil abounds.

These are among the chemical effects of lime, and its practical operation, and beneficial results, in the increase of the quantities of the products of the earth, are equally as astonishing as they are salutary. Lands which for years have yielded from 6 to 10 bushels of wheat, have, by the application of *lime*, the ploughing in of a single crop of clover, and a proper observance of the rotation system, been so far meliorated as to yield from 20 to 30 bushels of good heavy wheat to the acre. With such facts before the eyes of landholders, within the reach of lime, we would ask, is there any apology for their permitting their soil to remain longer impoverished? We broadly affirm that there is none—and we go further and say, that those who reside within an accessible distance in the *marl districts* of tide water, will be guilty of culpable negligence, if they longer omit to make a liberal application of it. Shell lime can be delivered on any estate lying on a navigable river or creek, not more than 70 miles from the place of procurement, for 8 cents a bushel; and should any man begrudge such an outlay, when it is sure to bring him back two and three hundred per cent.? We answer certainly not.

Economy.

The great art of acquiring wealth consists in saving, and in sacrificing some present enjoyment for the sake of future ease. Wasteful and extravagent people sometimes get rich, but the examples of success of such are the mere exceptions to a general rule. We are not the advocates of a mean and parsimonious system of expenditure. A rational participation in the comforts and luxuries of life, as far as then can be prudently indulged in without going beyond one's income, is legitimate and proper, while a rigid self-denial of ordinary indulgence from a spirit of avarice, is clearly culpable. There is, however, one species of economy which no one should ever lose sight of, whether he be rich or poor, or in moderate circumstances. It is, that *nothing should be wasted that can be applied to use.* The late Stephen Girard was eminently remarkable for his attention to small matters. At his farm below the city, which he used to visit almost every day in summer,not in a coach and four, but in an old shabby chaise with a rustic looking horse, all his arrangements were conducted with the strictest regard to economy. We are told that in the fall season, when he used to kill his cattle for making the beef with which he provisioned his ships, not a particle of the animal was lost. After salting the meat, and selling the hides to the tanners, the horns to the comb-makers, and the hoofs and the paunch to the venders of cow-heels and tripe, he sold the blood to the sugar refiners. Many a gentleman farmer would have thought attention to such small matters beneath his notice, just as many a female housekeeper thinks it beneath her notice to see that her servants do not put more wood on the fire than is necessary to produce the degree of heat that is required, or throw into the street meat, vegetables and bread, as is done in some families almost every day, enough to feed a small family.—*Phil. Gaz.*

Proper Soil for Mulberry Plantations.

Mulberry trees not only thrive best in a light loamy soil, but require a porous sub soil, which will permit their roots to descend without impediment. In a late visit which we made with a friend to the Farm School, Capt. Chandler showed us some mulberry trees which appeared rusty and mildewed, growing on an apparently rich loamy soil, but a *clay sub soil.* He also pointed out another parcel of mulberry trees, growing on a soil similar to that first mentioned in its upper stratum, but a sandy sub-soil, which were flourishing, the shoots vigorous, and the leaves a bright green, without spot or the least appearance of disease.—*N. E. Farmer.*

NEW YORK MARKET.

Week ending Wednesday, October 14.

ASHES—Our whole stock consists only of about 2000 barrels, of which 1300 are Pearls, and 700 Pots. The demand has been active, and all the Pots on sale were taken up yesterday, principally at $5 50, though some few reached nearly $6; which is an advance of 50 cents on the previous rate. Pearls remain at $7, as before.

FLOUR—The market closed firmly yesterday at $6 6a6 12½ for common, and 6 25 for fancy brands of Western Canal; Ohio at $6 a6 12½; Troy, $6 6; New York City, $6. Southern remains without change in prices.

GRAIN—Several sales of North River Rye have been made at 91 cents. The supplies of Corn have not been equal to the demand, and the price has advanced about 5 cents. There were sales of Northern Yellow at 105½ a 106 cents. No southern here. 3000 bushels North River Barley sold at 87½ a 88½ cts. Northern Oats 53 cts.

HOPS—A small sale of first sort was made at 15 cents.

PROVISIONS—Beef has declined 25 cents. Sales of prime at $5,50; and mess, $9, country inspection. The smallness of the stock of pork has enabled holders, in some instances, to obtain an advance of 25 cts. Lard is dull and half a cent lower. Butter keeps up at unusually high prices for the season. Cheese is also sold at some advance on the prices of last year.

TALLOW—Sales of city rendered continue to be made at 8½ cents.

A Good Opportunity.

ORDERS will be received at the ROCHESTER SEED STORE from persons wishing to procure *Fruit or Ornamental Trees, Shrubs, Plants, &c.* from the Albany, New York, or Long Island Nurseries, till 5th November, when one of the subscribers contemplates being there, and will attend to selecting the articles.

No extra charge will be made for commission.

REYNOLDS & BATEHAM.

oct 24–n3t-rf1t

A Valuable Farm for Sale.

ON the Ridge Road, south side, three miles west of Sandy Creek, and within two miles of the Erie canal, in the town of Murray, Orleans county, containing 248 acres, upwards of 130 highly cultivated—buildings large and convenient. This is desirable property, being situated on the best road in this state,—the soil varied, and every variety of the very richest quality. The situation, too, is delightful. Price moderate—terms easy. Inquire on the premises of W. B. ILES.

july 11–frtf aug 29

Fisher on the Vine.

OBSERVATIONS on the Culture of the European Vine, to which is added a Manual of the Swiss Vignerons and the art of Wine making, translated from the French—Price 75 cents. For sale by

june 20 HOYT & PORTER.

English Hogs.

The following description of English hogs, which we copy from the last American edition of the Edinburgh Encyclopedia, will be found to possess interest.

The *Berkshire* is a small boned breed and disposed to fatten quickly. It is the sort mostly fattened at the distilleries, and is good either for pork or bacon.

The *Chinese* breed, the size of which is small, and the flesh delicate, is to be met with in every country. It is the best adapted for using as pork, but is seldom cured into bacon, being too small for that purpose.

The *Gloucestershire* breed, which Mr. Marshall supposes to have been formerly the prevailing breed of the Island, is large but ill formed. Its color in general is white. It is a very unprofitable sort, and is chiefly confined to the Gloucestershire, Shropshire and the west of Devonshire.

The *Hampshire* breed is very large, but not so compact as the Berkshire. They are white, well disposed to fatten, and come up to a great weight when properly managed.

The *Herefordshire* is a large useful breed, but not by any means superior to either the Berkshire or Hampshire.

The *Rudgwick* breed, so called from a town of that name in Essex, on the confines of Surrey, is supposed by Mr. Middleton to be the largest in the Island; feeding to an extraordinary size, and at two years old weighing nearly double or treble the weight of other sorts of hogs at that age.

The *Northampton* breed, which are reared chiefly in that country, are of a large size, but they do not fatten very kindly. The breed of Shropshire is nearly similar to that of Northamptonshire.

The *Swing-tailed* breed, are not very numerous. Their size is small; their form well proportioned. They are hardy and fatten to a good weight.

The *Bedford* breed is a variety of swine introduced some years since by the late Duke of Bedford, called the larger-spotted-Woburn breed. They are very prolific, hardy and well disposed to fatten, attaining nearly twice the size and weight of other hogs.

Mixed Food.

Having been in early life much accustomed to, and a close observer of, Pennsylvania farming, I was much pleased with the German economy of increasing forage for their cattle, by aid of art in *mixing* food—they being assured that the process adds to the capacity of each ingredient, for furnishing nutritive properties.

This theory they put in practice throughout many parts of the state, in their mode of putting up *green clover*, as a forage for milk cows during winter; not only preserving, as they believe, in a superior manner, the fine qualities of the clover, but augmenting equally the quantity of forage. As fast as the clover is cut they stack it, mixing equal quantities of well preserved straw, and a small portion of *salt* sprinkled regularly over the clover as the layers are completed. The gratification with which the cattle appeared to feed on this preparation throughout the winter, I early noticed, especially when it was cut up in the box, and served out to them in troughs—one tin pint cup full of rye or Indian meal, seasoning the food of a day, when confined to their stalls.

I once had the pleasure of witnessing an experiment made by an intelligent German farmer, to ascertain the advantage of steaming this preparation, before feeding, and was much pleased with the result. The milk evidently was increased 25 per cent., and the capacity of the food for giving out its nutritive qualities almost the same. —*Farmer's Register.*

Preservation of Teeth.—Nearly all the expedients resorted to in these scientific days for the preservation of the teeth are directly calculated to hasten their decay. In the first place pulverized charcoal applied from day to day with a brush, an almost universal practice, wears upon the enamel by constant attrition; under this grinding operation, ultimately, the osseous or inner bony part begins to have a blue tinge, and finally carious spots give evidence of the certain commencement of disease. Salt, lemon juice, indeed any of the acids, are positively injurious, as they act directly upon the lime of which the teeth are constituted, destroy the cohesion of particles, and bring on a speedy decay. Ashes, next to charcoal, is intolerably bad. Peruvian bark is a good application for the gums, but possesses not the least control over the chemical composition of the teeth. Burnt crusts reduced to powder, also scratch and mar the enamel. Those persons who exclusively confine themselves to brushing their teeth daily with pure cold water, without any regard to the thousands of articles ostensibly prepared with cost, to arrest the progress of caries in teeth, with very few exceptions, preserve them in the highest state of organic perfection.—*Scientific Tracts.*

The Vine.—Yesterday the beautiful vineyard of J. Dow, Esq., Brooklyn, was thrown open to the gentlemen and ladies of that city, and to hundreds from New York, and not less than 1500 partook of the grapes and wine, most tastefully arranged under an extensive arbor in the centre of the vineyard. Bacchus or Cupid never witnessed a more fascinating scene, and if Bacchanalian hilarity was ever excusable, it would have been so on this occasion, the temptations were so great.

The urbanity and attention of Mr. Dow and his family, excited the admiration of the numerous visitors.

Our readers will be astonished to learn, that after the profuse consumption of grapes, Mr. Dow has still on his vines from six to seven tons of grapes, although the vines supporting them do not occupy more than about 100 feet square.—*N. Y. Gazette.*

THE IMPORTED BULL,

ROVER,

Of the Improved Durham Short Horns.

(Cows at Five Dollars each.)

ROVER is a beautiful roan color, calved in 1833. Got by Rockingham, Dam (Cherry) by Wonderful—Gr. Dam by Alfred—Gr. Gr. Dam by a son of Mr. Chilton's Red Bull.

Wonderful was by Young Lawn Sleeves; Dam by Phenomenon. Wonderful's Dam was by Claxton—Gr. Dam by own brother to Old Wynyard, out of Princess by Favorite.

Young Lawn Sleeves was by Old Lawn Sleeves, the property of Geo. Barker, Esq.

Claxton was by Wynyard, the property of Sir Henry Vane Tempest.

Rockingham was by Fairfax, Dam (Maria) by Young Albion—Gr. Dam (Lady Sarah) by Pilot—Gr. Gr. Dam by Agamemnon.

THOMAS WEDDLE.

The old Norton Farm, East Bloomfield, five miles west of Canandaigua, October 6th, 1835. oct 10

Monroe Horticultural Garden & Nursery.

THE subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, &c. &c.

ALSO—A few hundred of the Morus Multicaulis, or Chinese Mulberry, the White Italian Mulberry by the hunbred or thousand, Grape Vines of both native and foreign varieties, mosty of large size, for sale by the single vine, hundred or thousand, at reduced prices. The subscriber has a large collection of Green-House Plants of choice and select varieties, and in good condition.

☞ Orders for *Mr.* Rowe's Nursery received by the Publisher of this paper.

Catalogues will be sent to those who wish them, gratis, or may be had by calling at the office of the Genesee Farmer. ASA ROWE.

Greece, *Monroe* co. N. Y. Sept. 13, 1834.

The Complete Farmer & Rural Economist,

BY Thomas G. Fessenden, Editor of the New England Farmer, second edition, revised, improved, and enlarged, just published and for sale at the Rochester Seed Store.

This work is got up in superior style, published on fine paper with new stereotyped impression, and is decidedly the neatest thing of the kind yet published in this country. Booksellers and others supplied by the dozen at the trade price.

aug 8 REYNOLDS & BATEHAM.

The Silk Culturist, & Farmer's Manual.

"THE object of this publication is to disseminate a thorough knowledge of the cultivation of the Mulberry Tree in all its varieties, the rearing of Silk Worms, the production of Cocoons, and the reeling of silk in the most approved method."

It will also contain interesting matter on Agricultural subjects generally.

Published monthly at Hartford, Conn., by the Hartford County Silk Society, at 50 cents per year, in advance. Subscriptions received at the Rochester Seed Store, by

july 25 REYNOLDS & BATEHAM.

50,000 White Italian Mulberry Trees,

FOR Sale at the following prices: From 5 to 7 feet high, $25 per 1000, or $3 per 100; from 3 to 5 feet high, $16 per 1000, or $2 per 100. *The price per* 100 *will be charged in all cases when less than* 1000 *are taken.*

Persons wishing to engage in the pleasant and profitable business of raising Silk, have now a good opportunity for supplying themselves with Mulberry Trees, without the tedious delay of raising them from seed.

The Trees are from 3 to 4 years old, and from 3 to 7 feet high, with numerous lateral branches.

They will be fit to take up by the 10th of October, in time to transport them almost any distance before the closing of navigation.

All orders by mail will be promptly attended to, and the trees delivered either at the Erie Canal or Lake Ontario boats, according to order.

REYNOLDS & BATEHAM.

Rochester, Sept. 25, 1835. aptf

NOTICE—Redemption of Lands sold for Taxes—State of New York, Comptroller's Office—Notice is hereby given, pursuant to section 76, title 3 of chapter 13 of the first part revised statutes, that unless the lands sold for taxes, at the general tax sale held at the Capitol in the city of Albany, in the months of March and April 1834, shall be redeemed by the payment into the treasury of the state, on or before the 21st April next, after the date hereof, of the amount for which each parcel of the said lands was sold, and the interest thereon at the rate of ten per centum per annum from the date of the sale, to the date of the payment, the lands so sold and remaining unredeemed, will be conveyed to the purchasers thereof. Dated October 2, 1835.

oct 6-6w A. C. FLAGG, Comptroller.

Election Notice.

Sheriff's Office, Monroe co., Rochester, August 12, 1835.

A GENERAL ELECTION is to be held in the county of Monroe on the second, third and fourth days of November next, at which will be chosen the officers mentioned in the notice from the Secretary of State, of which a copy is annexed.

ELIAS POND, Sheriff.

State of New York, Secretary's Office. Albany, August 1, 1835.

Sir—I hereby give you notice, that at the next general election in this state, to be held on the 2d, 3d and 4th days of November next, a Senator is to be chosen in the eighth senate district, in the place of Chauncey J. Fox, whose term of service will expire on the last day of December next.

Notice is also given, that at the said election the following proposed amendments to the constitution of this state will be submitted to the people viz:

For restoring the duties on goods sold at auction, and the duties on salt to the general fund.

JOHN A. DIX, Secretary of State.

To the Sherif of the county of Monroe.

N. B. The Inspectors of Election in the several towns in your county wilgive notice of the election of Members of Assemblly and for filling any vacancies in county offices which, may exist. aug 15